DOCUMENT RESUME

ED 235 238 TM 830 665

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TITLE Assessment Procedures and Enrollment Patterns of Cuban-Americans, Mexican-Americans, and Puerto Ricans in Special Education and Gifted Programs.
SPONS AGENCY Department of Education, Washington, DC.
PUB DATE 15 Apr 83
GRANT G008100031
NOTE 29p.; Paper presented at the Annual Meeting of the American Educational Research Association (67th, Montreal, Quebec, April 11-15, 1983).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Assessment; Educational Needs; Enrollment Trends; Evaluation Methods; *Gifted; *Hispanic Americans; Language Tests; Learning Disabilities; Mild Mental Retardation; Questionnaires; Spanish Speaking; *Special Education; *Student Placement; *Testing Problems

ABSTRACT

This descriptive study investigated the relationships between frequency of use of selected modifications in the assessment process of the Hispanic student, and subsequent enrollment patterns into special education. A 35 item questionnaire was mailed to 157 administrators of special education in six states. The most frequently used assessment procedure was the administration of language dominance tests, followed by the administration of nonverbal assessments and the use of criterion-referenced measures. Least frequently used were local norms and opportunities for Hispanic students to increase test-taking skills. While findings revealed Hispanic students to not be over-represented in special education, results showed Hispanic students to be enrolled in programs for the learning disabled in far greater numbers than in programs for the educable mentally retarded. Contingency table analysis and application of chi-square and gamma revealed five variables to be statistically significant. These were: (1) criterion-referenced tests; (2) activities to increase test-taking skills; (3) local norms; (4) pluralistic assessments; and (5) inclusion of an Hispanic on decision-making committees. (Author/PN)

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ASSESSMENT PROCEDURES AND ENROLLMENT PATTERNS OF CUBAN-AMERICANS, MEXICAN-AMERICANS, AND PUERTO RICANS IN SPECIAL EDUCATION AND GIFTED PROGRAMS

ROUND TABLE FORMAT, APRIL 15, 1983

AERA 1983 ANNUAL MEETING

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TM830665

This research was partially funded by the U. S. Department of Education under Student Research Grant (G008100031), however, no official endorsement is inferred.

Lori Bell Mick

ABSTRACT

Assessment Procedures and Enrollment Patterns of Cuban-Americans, Mexican-Americans, and Puerto Ricans in Special Education and Gifted Programs

This descriptive study investigated the relationships between frequency of use of selected modifications in the assessment process of the Hispanic student, and subsequent enrollment patterns into special education. A 35 item questionnaire was mailed to 157 Administrators of Special Education in six states. The most frequently used assessment procedure was the administration of language dominance tests, followed by the administration of nonverbal assessments and the use of criterion-referenced measures. Least frequently used were local norms, and opportunities for Hispanic students to increase test-taking skills. While findings revealed Hispanic students to not be over-represented in special education, results showed Hispanic students to be enrolled in programs for the learning disabled in far greater numbers than in programs for the educable mentally retarded. Contingency table analysis and application of chi-square and gamma revealed five variables to be statistically significant ($p > .05$). These were: 1) criterion-referenced tests; 2) activities to increase test-taking skills; 3) local norms; 4) pluralistic assessments, and 5) inclusion of an Hispanic on decision-making committees.

Differences found among the three Hispanic subcultures were: LEAs of Puerto Rican dominance enrolled relatively the fewest Hispanic students into special education, while those of Mexican dominance enrolled the highest percent into programs for the learning disabled (5%). Decision-making committees frequently included an Hispanic. Criterion-referenced tests were used most frequently with Cuban students, test-taking activities with Mexican students, and interpreters with Puerto Rican students.

INTRODUCTION

Background of the Problem

The problem under study originally grew out of a court case heard in Holyoke, Massachusetts, in which evidence was presented to reveal that Hispanic students were significantly underenrolled in special education (Education of the Handicapped Law Report, 1979). These findings were contrary to the overwhelming documentation collected throughout the previous five decades, in which Hispanic students were shown to be over-represented in special education in general, and in programs for the mentally retarded in particular (Sanchez, 1934; Mercer, 1971; Dunn, 1968; Bryden, 1974; Oakland and Laosa, 1977; Morris, 1977; Casteñeda, 1976; Bernal, 1977, Carter and Segura, 1979). While seeking additional information on enrollment patterns, the investigator uncovered yet another position report, in which the Office for Civil Rights concluded from the results of their comprehensive survey (Civil Rights Survey of Elementary and Secondary Schools, 1980) that Hispanic students were proportionately enrolled in special education. The question then of

Hispanic enrollment patterns apparently had three different answers; over, under or proportionate representation.

In searching for explanations for these conflicting responses, the writer concluded that an examination of enrollment patterns of Hispanic students in special education should not be separated from the accommodations made to ensure nondiscriminatory assessment. Essentially then the principal purpose of the study was to describe the frequency of use of selected accommodations in the assessment process in an effort to determine what relationships, if any, existed between assessment procedures and the subsequent enrollment of Hispanic students into special education or gifted programs. For example, if a school division almost always used adaptive behavior measurements or almost never included an Hispanic on decision-making committees, would they tend to enroll fewer or more Hispanic students into programs for educable mentally retarded or learning disabled?

A secondary purpose, but somewhat pioneering aspect of the investigation was to collect information in such a manner so as to make general comparisons among the three Hispanic subcultures of Cuban-Americans, Puerto Ricans, and Mexican-Americans.

Methodology

Because the primary end sought of the study was to describe present phenomena in widely diverse geographic areas of the United States, the mailed questionnaire was selected as an appropriate method for the collection of data. Through close cooperation with state education agencies, an enumeration frame was developed which met criteria to provide answers to the seven research questions. A 35-item questionnaire, employing ordinal and nominal levels of measurement was developed by the investigator and field tested over a period of six months, using Dillman's (1978) three categories of field reviewers. The instrument sought information on assessment procedures, composition of decision-making committees, parental involvement and enrollment data on Hispanic and non-Hispanic students in special education as whole, and programs for the educable mentally retarded, learning disabled or gifted.

Data analysis included the examination of information for each variable by the use of summary statistics and illustrative graphs, while the principal method used to investigate significant relationships among variables was contingency table analysis (crosstabulations). The

statistic gamma (G), appropriate for determining the degree of association between ordinal data (Freeman, 1965), and the nonparametric statistic chi-square (X^2) for determining independence were applied to cross-tabulations. Enrollment data submitted from each school district were converted into a three level index patterned after the formula developed for the Holyoke case. Essentially, the ratio of non-Hispanic special education enrollment to non-Hispanic total school enrollment was subsequently compared to the ratio of Hispanic special education enrollment to Hispanic total school enrollment. The first ratio (given in percent) became the criterion from which to apply plus or minus 20%, in order to create the three classificatory intervals or labels of "proportionate," "over," or "under" representation. For example, applying the formula to actual data submitted on a questionnaire, it was found that the total non-Hispanic special education enrollment was 1,150, the total non-Hispanic school enrollment was 33,000 giving a ratio of 3.5%. This figure became criterion from which to compare the enrollment data. It was revealed that the total Hispanic special education enrollment was 350 and the

total Hispanic enrollment was 12,000 giving a ratio of 3%. Determine then whether 3% fell within plus or minus 20% of criterion as seen below:

2.8%	3.5%	4.2%
(-20% of criterion) "Under"	(criterion) "Proportionate"	(+20% of criterion) "Over"

This Local Education Agency was assigned the index of "proportionate" because 3% fell within 20% of criterion. This procedure was performed with each Local Education Agency for each category of special education, educable mentally retarded, specific learning disabled and gifted/talented. The method, albeit somewhat imprecise, permitted the investigator to conduct contingency analysis in an effort to determine what relationships, if any, existed between the representation classification and the frequency of use of accommodations made in the assessment process.

Results

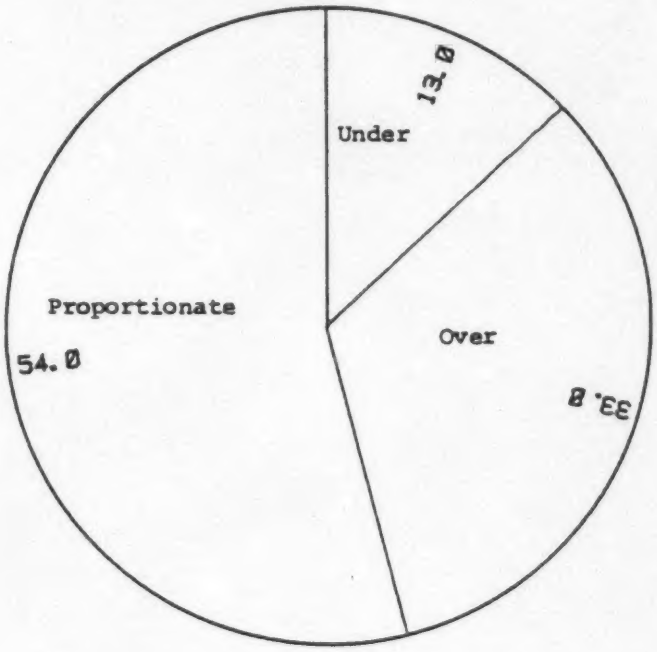
Results were taken from questionnaires mailed to 157 Administrators of Special Education (ASE's) during the Fall of 1981 in the four states of Texas, New Mexico, Florida, and Massachusetts, and the two cities of Philadelphia and New York. A 70% response rate was achieved using Dillman's

procedures (1978). The 107 returned questionnaires represented a total school enrollment of 1,567,006 students including 631,425 Hispanic students of whom approximately 400,000 were of Mexican descent, 93,000 of Cuban background, and 115,000 of Puerto Rican origin.

Conclusions and Discussion

1. Findings revealed that 62% of the Local Education Agencies (LEA's) were classified as proportionately representing Hispanic students in special education, while 14% were categorized as underrepresenting and 24% as overenrolling. In programs for the learning disabled, the majority of LEA's were classified as proportionate (61%), while 20% were overenrolling Hispanic students in programs for the learning disabled. In programs for the educable mentally retarded, the majority of Local Education Agencies (61%) were classified as proportionate while nearly a third were classified as overrepresenting Hispanic students in such programs. Of the 49 respondents who completed the item on gifted enrollment, 63% underrepresented, 6% overrepresented, and 31% proportionately represented Hispanic students into gifted/talented programs. (Figures 1 and 2)

Enrollment of Hispanic Students in Educable Mentally Retarded Programs (N=85)



Enrollment of Hispanic Students in Special Education (N=93)

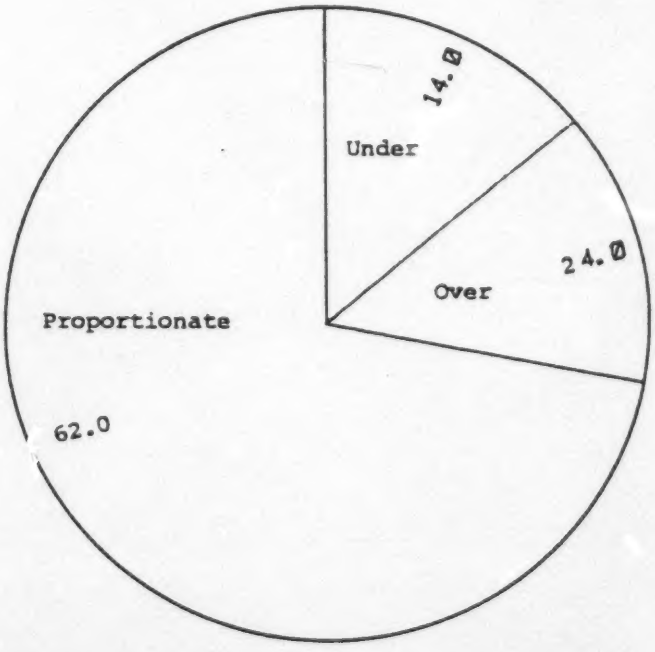
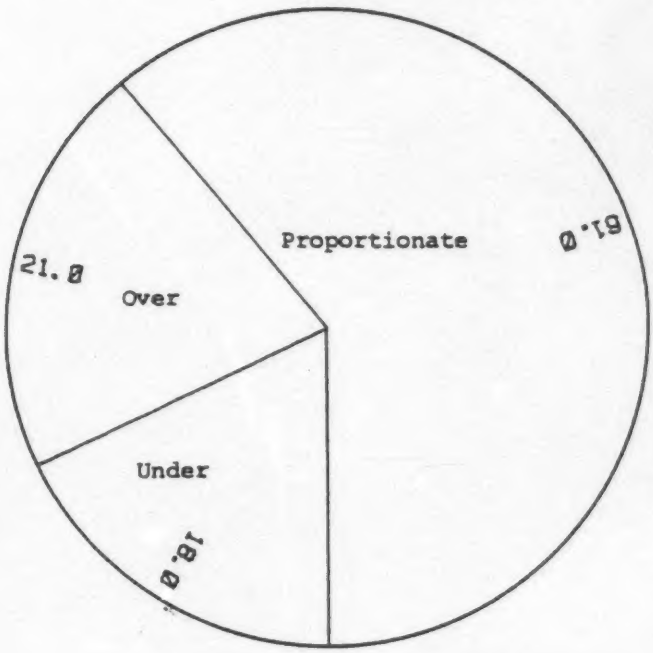


Figure 1. Enrollment patterns in EMR and Special Education.

Enrollment of Hispanic Students in Specific Learning Disabilities Programs (N=89)



Enrollment of Hispanic Students in Gifted/Talented Programs (N=49)

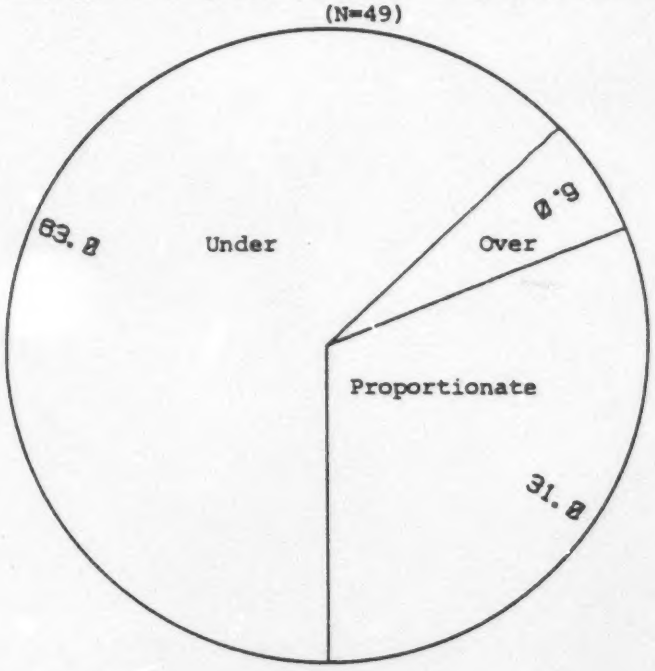
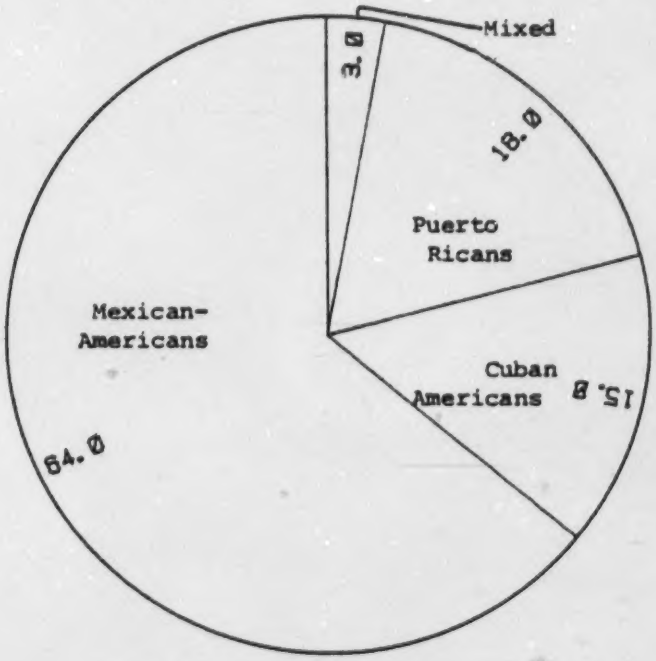


Figure 2. Enrollment patterns in SLD and gifted/talented.

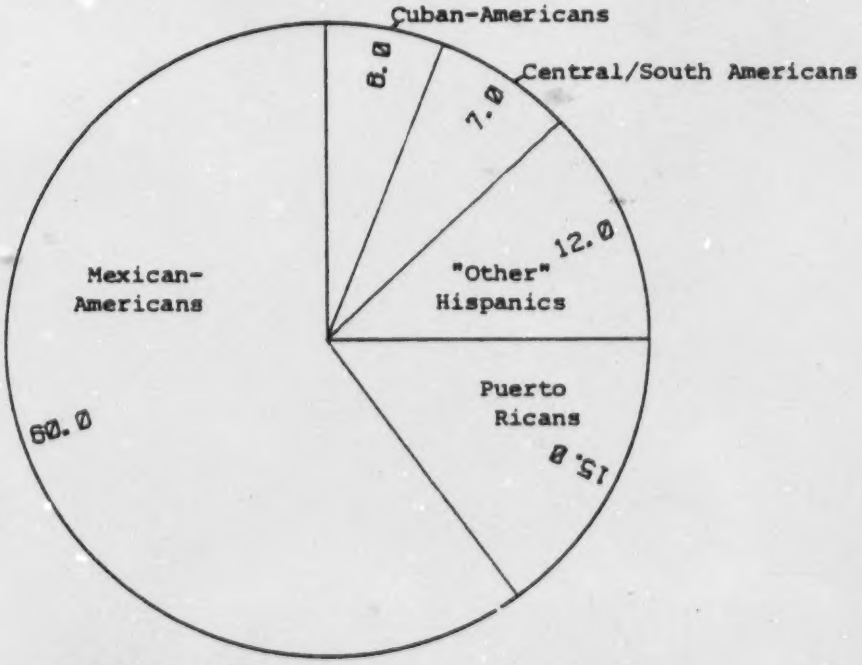
2. When the findings of the study were compared to that national incidence rates of 1980, they were found to be similar. For example, the Government Accounting Report (GAO Report 1981) noted that 8.16% (excluding 89:313) of the nation's school-age population were receiving special education, while of this total, 36% were classified as learning disabled. In the present study, findings revealed that 10.4% of the school population were enrolled in special education and of this percent, 35% were categorized as learning disabled. Of the 10.7% Hispanic students receiving special education, 44% were classified as learning disabled, the identical finding of the GAO Report (1981). Of the 49 respondents were completed the two enrollment items on gifted programs, the majority (63%) underenrolled the Hispanic student. (Figure 3)

3. Past surveys on enrollment information on minority language children have usually collected data under the general term of "Hispanic," thus ruling out any attempt to examine differences among the Hispanic subcultures. In contrast, the present investigation sought information in such a manner, so as to make generalizations regarding

Hispanic School Enrollment from Responding LEAs by Subculture



Hispanic Population in the United States by Subcultures*



* United States Census (1978)

Figure 3. Hispanic enrollment by subcultures.

enrollment patterns among the three subcultures of Cuban-American, Mexican-American, and Puerto Rican students.

Findings revealed that those Local Education Agencies whose Hispanic population was predominately of Puerto Rican descent, enrolled proportionately the fewest Hispanic students into special education as a whole, and also in programs for the learning disabled. (Tables 1, 2, 3)

Two possible explanations are proposed. In this study, contrary to other surveys of a similar nature, each school district was assigned a representation label, based on the data submitted on the questionnaire. This classification was derived from a formula which set out to compare the ratio of non-Hispanic students to Hispanic students, with no interest as to the ethnicity or racial composition of the term non-Hispanic. Therefore, in the Puerto Rican comparison, populations generally emerged primarily from the industrial cities of the Northeast, which included fairly large Black populations. This fact may have increased the possibility that the non-Hispanic ratio would be higher representation rate in special education than the Hispanic (Brown, 1980; GAO Report, 1981). A second explanation resides in the low responses rate of

Table 1

Numbers of Hispanic Students Enrolled, First by Total Then in Special Education: By Subculture

Subculture[a]	Total Hispanic Enrollment					Special Education				
	Sum	M	SD	Mdn	Range	Sum	M	SD	Mdn	Range
Mexican-Americans (74)	401,818	5,430	8,711	2,360	32-49,295	41,922	567	943	242	5-5,062
Cuban-Americans (4)*	93,171	23,293	42,534	2,967	222-87,016	8,192	2,048	3,701	284	35-7,590
Puerto Rican (14)	115,392	8,242	6,422	7,505	250-21,000	8,195	585	492	457	23-1,500

*LEA enrolls 87,000 Hispanic students, a number which greatly influences the M.

[a]Application of 60% criterion: Does not infer that each student is of Cuban, Mexican, or Puerto Rican descent.

Table 2

Numbers of Hispanic Students Enrolled in Specific Learning Disabilities or Educable Mentally Retarded

Subculture[a]	Specific Learning Disabilities					Educable Mentally Retarded				
	Sum	M	SD	Mdn	Range	Sum	M	SD	Mdn	Range
Mexican-Americans (74)	20,450	276	447	95	0-2,057	3,271	44	111	17	0-873
Cuban-Americans (4)*	3,105**	776	1,488	41	15-3,008	551**	138	219	43	3-462
Puerto Ricans (14)	2,654	190	224	109	2-675	1,095	78	94	53	20-312

[a]Application of 60% criterion: Does not infer that each student is of Cuban, Mexican, or Puerto Rican descent.

*One LEA enrolls 87,000 Hispanic students, a number which greatly influences the M.

**One returned questionnaire provided enrollment data in percent for SLD and EMR.

Table 3

The Comparison of Non-Hispanic to Hispanic Student Enrollment in Special Education, Specific Learning Disabilities, or Educable Mentally Retarded: By Subculture Given in Percent

Programs	Subculture[a]		Subculture[b]		Subculture[c]	
	Non-Hispanic	Hispanic (Predominately Cuban)	Non-Hispanic	Hispanic (Predominately Mexican)	Non-Hispanic	Hispanic (Predominately Puerto Rican)
Special Education	11.9%	8.8%	9.7%	10.4%	11.5%	7%
Specific Learning Disabilities	3.9%	3.3%	4%	5%	2.4%	2.3%
Educable Mentally Retarded	1.2%	.6%	.7%	.8%	1.3%	1%

[a] Represents four LEAs, 93,171 Hispanic students predominately Cuban descent.

[b] Represents 74 LEAs, 401,818 Hispanic students predominately Mexican descent.

[c] Represents 14 LEAs, 115,392 Hispanic students predominately Puerto Rican descent.

the Puerto Rican populations, thus, making a valid comparison among the subcultures rather risky.

Local Education Agencies whose Hispanic population was predominately of Mexican origin revealed minimal differences when comparing non-Hispanic to Hispanic enrollments in special education (9.7% and 10.4%). Compared with the differences in the previously discussed Puerto Rican populations of 11.5% compared to 7%, there were considerable variations.

Two explanations are suggested: it was found through crosstabulations that the size of the Local Education Agencies was related to proportionate representation; that is, that small to medium school districts were slightly more likely to be classfied as proportionately represented in special education. The great majority of Local Education Agencies whose populations were of Mexican predominance were classified as small or medium in size. A second explanation rests in the fact that high density of the Hispanic population tended to be related to proportionate representation. School districts with Mexican predominance were often more densely Hispanic than either those of Puerto Rican or Cuban dominance.

When non-Hispanic enrollment patterns were compared to Hispanic enrollment patterns whose populations were predominately of Cuban descent, they were found to under-enroll Hispanic students into special education, while proportionately enrolling in learning disabilities, and slightly underenrolling in programs for the educable mentally retarded. Again, explanations rested in the size of the school districts, for one school district enrolled 87,000 Hispanic students, most of whom were of Cuban descent.

4. Data were collected in a manner so as to make some gross generalizations as to differences or similarities among the three subcultures in the selection and frequency of adaptations made in the assessment of the Hispanic student. Highlights of these differences are as follows:

   a. Criterion-referenced measures were used more frequently by those schools whose populations were predominately of Cuban background, although the differences among the remaining two subgroups were minimal. The use of pluralistic assessment was considerably less by those of Mexican dominance than by those of Puerto Rican or Cuban dominance.

b. Local school districts whose Hispanic students were predominately of Puerto Rican or Cuban origin were less likely to teach test-taking skills, while those of Mexican origin were by far the most likely to provide this activity, although this practice, in general, was not frequently used.

c. Respondents who served schools of predominately Puerto Rican dominance tended to employ the use of an interpreter and to administer intelligence tests in Spanish more frequently than those of Mexican dominance.

d. Nonverbal subscales were used most frequently by Local Education Agencies of Cuban dominance, followed by those of Mexican and then Puerto Rican, while findings revealed a low frequency of use of local ethnic norms for scoring, regardless of subculture.

e. Decision-making committees whose Hispanic subculture was of Mexican origin were the most likely to include an Hispanic professional, however, differences among the three subcultures were small.

5. Contingency analysis was performed between enrollment patterns and frequency of use of nondiscriminatory assessment procedures. Statistics chi-square and gamma were applied to dete[illegible] relationships. Findings revealed criterion-referenced tests to be significant ($\underline{X}^2$, $\underline{p} < .05$) when crosstabulated with Hispanic enrollment into learning disabled programs.

Furthermore when a high frequency of use of providing test-taking activities was crosstabulated with representation in educable mentally retarded programs, $\underline{Y}^2$ was significant. Finally, if a school division frequently included an Hispanic professional on decision-making committees for special education placement, this school division was more likely to be indexed in this study as "proportionately" enrolling Hispanic students into EMR programs.(Table 4)

Two assessment modifications were found to be significant by application of Gamma ($\underline{G}$, $\underline{p} < .05$) when crosstabulated with Hispanic enrollments into EMR programs; these were pluralistic assessment, and the use of local ethnic norms for scoring tests. (Table 5)

It might be argued that those Local Education Agencies who frequently used criterion-referenced tests as a part of

Table 4

Chi-square Analysis of Association Between Selected Assessment Variables, and the Representation of Hispanic Students in SLD[a] or EMR[b] Programs

Variable	Specific Learning Disabled			Educable Mentally Retarded		
	df	x^2	p value	df	x^2	p value
Pluralistic assessments	8	8.47	0.39	8	9.52	0.29
Criterion-referenced tests	8	16.31	0.03*	8	3.50	0.89
Culture-fair tests	8	6.53	0.59	8	4.61	0.79
Language proficiency tests	8	6.64	0.16	8	5.78	0.44
Improve test skills	8	8.43	0.39	8	16.39	0.03*
IQ tests in Spanish	8	5.28	0.73	8	6.41	0.60
Interpreter	8	14.68	0.06	8	5.46	0.70
Match examiner to examinee	8	9.87	0.27	8	9.49	0.30
Nonverbal subscales	8	10.56	0.22	8	7.82	0.45
Local ethnic norms	8	3.93	0.86	8	8.74	0.36
Classroom observation	8	5.33	0.72	8	16.10	0.04*
Referral Committee includes Hispanic	8	9.24	0.32	8	15.97	0.04*
Multidisciplinary includes Hispanic	8	6.72	0.57	8	9.47	0.30
IEP Committee includes Hispanic	8	8.78	0.36	8	15.80	0.04*

[a]Specific Learning Disabilities [b]Educable Mentally Retarded *$p > .05$

Table 5

The Statistic Gamma (G) Used to Show Strength and Direction of Association Between the Frequency of Use of Selected Assessment Variables, and the Representation of Hispanic Students in Programs for Gifted/Talented, or Educable Mentally Retarded

	Gifted/Talented		EMR	
Variable	(G)	p	(G)	p
Pluralistic Assessments	-.04	.62	.28	.03*
Criterion-referenced tests	-.21	.10	.09	.90
Culture-fair tests	-.22	.08	-.02	.92
Language Proficiency tests	-.06	.74	.02	.92
Improve test-taking skills	.14	.24	-.06	.65
IQ tests in Spanish	-.30	.01**	.18	.22
Interpreter	-.38	.001**	-.01	.96
Match examiner to examinee	-.21	.09	.21	.13
Nonverbal subscales	-.27	.03*	.15	.28
Local ethnic norms	-.17	.17	.28	.05*
Classroom observation			.20	.17
Referral Committee includes Hispanic			.16	.34
Multidisciplinary includes Hispanic			.05	.79
IEP Committee includes Hispanic			.02	.88

*$p > .05$
**$p > .01$

the assessment process, were more likely to be classified as proportionately enrolling Hispanics in programs for the learning disabled. By making a classroom observation, chances were slightly better that the Hispanic student would be in a school division classified as proportionately enrolling students into EMR programs. The second variable, that of using pluralistic assessment information was not independent from EMR enrollment. Tentative interpretation might be that of those schools who very seldom used pluralistic assessment, more than half were found to be overenrolling Hispanic students in programs for the educable mentally retarded.

The remaining two variables found to be significant were the use of local ethnic norms and the provision of test-taking activities to increase test-taking skill. Although the frequency of use of each of these was low, of those respondents who always provided test-taking activities, two-thirds were classified as proportionate. The use uf local ethnic norms for scoring provided evidence too conflicting to make a suggested interpretation.

The inclusion of a professional of Hispanic background on the decision-making committees was found to be significant with enrollment patterns in programs for the educable

mentally retarded. One might speculate that this inclusion increased the prediction that those school districts would be classified as either proportionately or underrepresented in programs for the educable mentally retarded.

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